EPA

Region 10
1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington

August 18, 1994

Proposal to Amend Record of Decision

Union Pacific Railroad Sludge Pit Superfund Site

Pocatello, Idaho

EPA PROPOSES AMENDMENTS TO CLEANUP PLAN

The U.S. Environmental Protection Agency (EPA) is seeking comments on proposed amendments to the 1991 Record of Decision (ROD) for the Union Pacific Railroad (UPRR) Sludge Pit Superfund site in Pocatello, Idaho.

Public Comment Period
August 22, to September 22, 1994

EPA is proposing several changes to the original cleanup plan. Test results from comprehensive soil and ground-water sampling, onsite and offsite, indicate that several cleanup measures originally selected for the site are no longer necessary. Therefore, EPA is proposing to amend the 1991 ROD, a public document that explains which cleanup alternatives will be used at a Superfund site, to eliminate the following cleanup measures:

1. An in-place soil washing system to flush contamination from soil (called "in-situ soil flushing" in the ROD);

2. A dissolved air flotation (DAF) unit used to remove certain contaminants in ground water; and,

3. A permanent site fence around the sludge pit.

This proposed plan describes the results of testing conducted as part of the remedial design process, the rationale and recommended changes to the current remedy, and their effect on achievement of the site cleanup levels. It is EPA's opinion these changes will not affect the level of environmental protection at the site.

In addition, this plan proposes the final, site-specific cleanup levels for the contaminated sludge/soil and ground water. The 1991 ROD identified only preliminary target cleanup goals, which were to be finalized once remedial design support activities were completed. The cleanup levels are set to protect the community, onsite workers and the environment from potentially unhealthy exposures to contaminated soil and ground water.

EPA is the lead agency for this Superfund site, with the cooperation and support of the Idaho Division of Environmental Quality (IDEQ). IDEQ has concurred with the proposed modifications to the current cleanup plan. UPRR is the sole responsible party at this site and is implementing and paying for cleanup of the contaminated sludge and ground water.

You are encouraged to comment on the proposed changes to the plan in writing during the public comment period which begins August 22, 1994, and ends September 22, 1994. EPA, in consultation with IDEQ, will approve these changes only after all timely comments have been considered. Written comments should be sent to:

Ann Williamson, Site Manager
U.S. Environmental Protection Agency
1200 Sixth Avenue, HW-113
Seattle, Washington 98101

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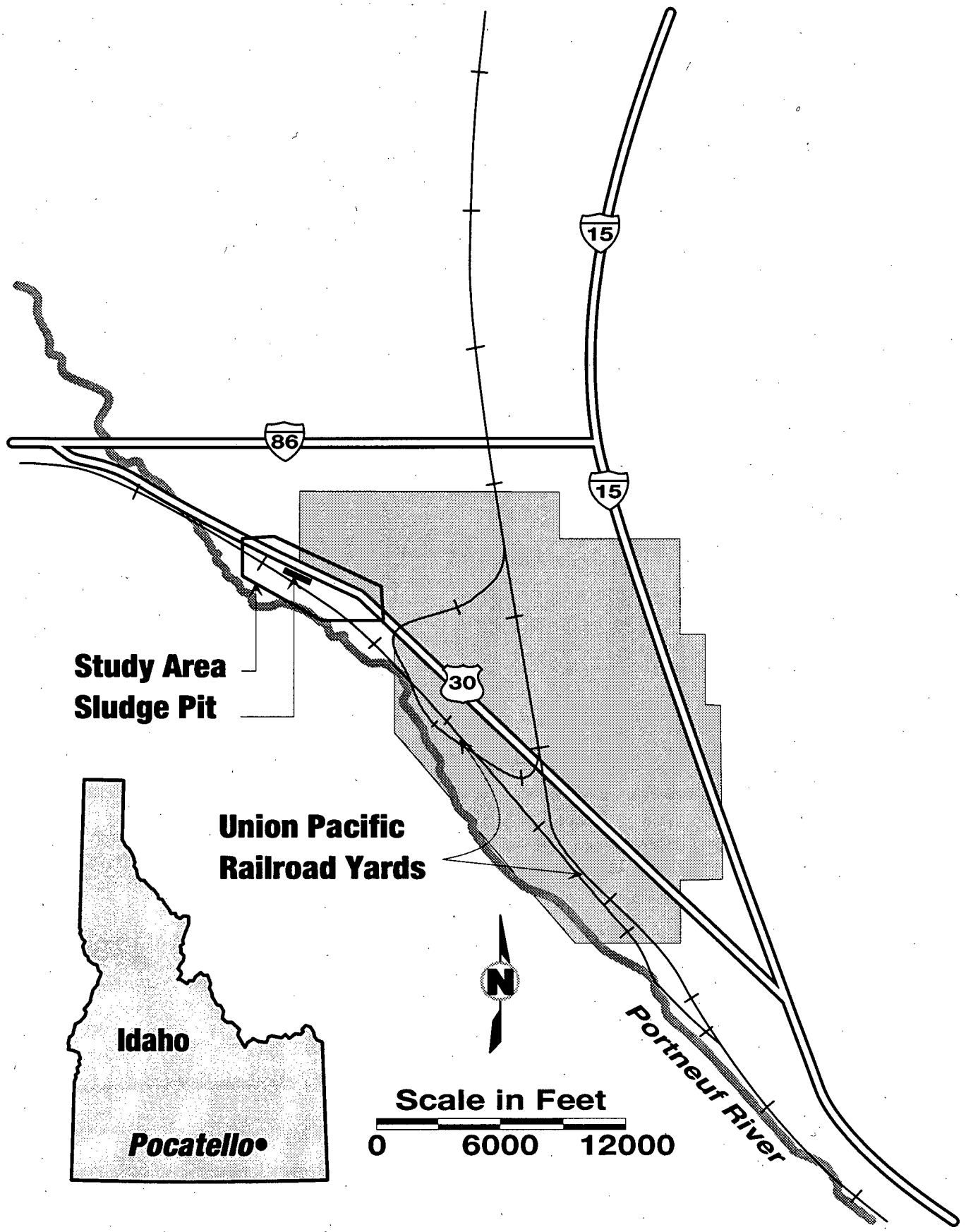

Union Pacific Railroad Sludge Pit Location

If you are interested in having EPA hold a public meeting to discuss the proposed changes to the plan, please contact **Ann Williamson**, Project Manager at **(206) 553-2739** or **Jean Baker,** Community Relations Coordinator, at **(206) 553-2587** or call toll-free **1-800-424-4372** by September 6, 1994.

SITE HISTORY

The UPRR Sludge Pit is approximately one acre in size, located north of UPRR's West Pocatello Railroad Yard, which covers a few hundred acres, and is northwest of the city of Pocatello, Idaho. The site, in a mixed commercial and light industrial setting, is bounded to the north by U.S. Highway 30 West and to the south by the Portneuf River (see map). There are residential areas approximately one third of a mile to the north and east of the site. The McCarty's/ Pacific Hide and Fur Superfund site is adjacent to UPRR property on the northeast.

UPRR has operated a railroad yard on the property since the turn of the century. An onsite waste water treatment plant receives water from all rail yard storm drains and from many building floor drains. Between 1961-1983, approximately 3,000 gallons per week of sludge were generated by treatment of the waste water at the plant and disposed in an unlined pit.

In 1983, an EPA site investigation found that seepage from the sludge pit, and an adjacent railroad tie treating facility contributed to ground-water contamination. Samples from nearby private wells contained low levels of organic compounds consistent with the wastes discharged to the pit. As a result of the investigation, the sludge pit site was placed on EPA's National Priorities List in 1984.

During 1990-1991, UPRR finalized the remedial investigation (RI), the human health and ecological risk assessment, and the feasibility study (FS). During the RI and FS, data is gathered to determine the type and extent of contamination at a site; cleanup criteria are established; cleanup alternatives are identified and the technology and costs of the alternatives are analyzed.

The preferred alternative was identified in the proposed plan published June 3, 1991. Copies of the proposed plan were sent to approximately 130 interested parties. Concurrent with distribution of the 1991 proposed plan, EPA made the Administrative Record available for public review at EPA's offices in Seattle, Washington, and at the Pocatello Public Library. Notice of the proposed plan availability and public comment period was placed in the June 6, 1991, Idaho State Journal. No comments were received during the public comment period and the ROD was signed on September 10, 1991.

The selected remedy identified in the 1991 ROD included:
(1) excavation and offsite treatment/ disposal of the contaminated sludge; (2) treatment of remaining soil and ground water via in-situ soil flushing; (3) upper aquifer ground-water extraction and treatment via an onsite oil/water separator and a DAF unit prior to discharge to the City of Pocatello publicly owned treatment works (POTW), and funding for an alternate drinking water supply, if necessary; (4) capping the entire pit area following excavation; (5) a permanent site fence; (6) long term ground-water sampling and analysis; and, (7) implementation of a comprehensive, onsite and offsite soil and ground-water sampling effort prior to initiation of remedial activities.

Following successful negotiations with UPRR, a consent decree was entered by the court on July 23, 1992, describing UPRR's responsibilities for conducting the remedial design/remedial action (RD/RA). The RD develops the technical drawings and specifications used for the RA which is the construction and implementation of the selected cleanup alternative. All of these documents are available in EPA's offices in Seattle, Washington.

SUBSEQUENT EVENTS AND NEW INFORMATION

In 1992 and 1993, UPRR undertook several remedial design support activities which involved comprehensive onsite and offsite, soil and ground-water sampling. These efforts were conducted to determine the

background contaminant levels for ground water and soil. In addition, UPRR performed three rounds of ground-water sampling of all onsite monitoring wells to establish current volatile organic compound (VOC), polycyclic aromatic hydrocarbon (PAH), and metal concentrations, and to evaluate any trends in contaminant concentrations. UPRR also conducted a soil treatability study to test tap water and commercially available detergents (surfactants) as potential soil flushing solutions for use in the in-situ (in-place) soil flushing system.

SUMMARY OF EPA'S RATIONALE AND RECOMMENDATIONS FOR CHANGING THE ORIGINAL REMEDY

1. In-Situ Soil Flushing: The original purpose of the in-situ soil flushing system was to remove contaminants from material left behind following excavation of the sludge, and to improve ground-water quality. Based on test results, EPA has concluded that in-situ soil flushing is ineffective and unnecessary to protect human health and the environment.

Tap water, without any detergent added, was only minimally effective at reducing soil concentrations of organic chemicals (such as VOCs and PAHs), and was relatively ineffective at reducing metals concentrations. Tap water amended by surfactants was effective at reducing total petroleum hydrocarbons, VOCs, and PAHs in soil, however, the surfactants were difficult to rinse from the soil.

After the treatability study was completed and the results analyzed, ground-water contaminant concentrations did not improve significantly as compared to concentrations observed prior to the soil flushing. These results suggest that installation and operation of the soil flushing system would not achieve the goal of improving or protecting ground-water quality.

Furthermore, following sampling and analysis of soil in the gravels beneath the planned depth of the cleanup action, test results confirmed that contaminant levels in soil remaining onsite following the excavation were

(1) significantly less than contaminant levels in the sludge which currently poses a 4 in 10,000 excess risk of cancer from ingestion over an extended period of time, and (2) protective of ground-water quality since predicted levels of contaminants in ground water did not exceed the site cleanup level of 1 in 10,000 excess risk of cancer.

2. Dissolved Air Flotation (DAF) Unit: The original purpose of the DAF unit was to remove emulsified (suspended) oil, semivolatile organic compounds and metals from the contaminated ground water as part of the treatment system prior to discharge to the City of Pocatello POTW.

This technology does not appear necessary as a pretreatment measure because of the relatively low contaminant concentrations currently present and expected in the future in extracted ground water, as compared to contaminant concentrations typically present in waste streams requiring DAF treatment.

The ground-water pretreatment system will include the use of oil/water separation (to remove any floating oils) prior to offsite discharge. This method of treatment is sufficient to meet discharge requirements mandated by the City of Pocatello POTW.

3. Permanent Fence Around Sludge Pit: The primary purpose of the permanent fence was for site security and to restrict public access. UPRR installed a temporary fence during cleanup activities to provide this protection. Because the contaminated sludge/soil in the sludge pit will be removed to the maximum extent

practicable, and the sludge pit backfilled with clean materials and capped, the risk of future exposure to contaminated soil and ground water will be eliminated. Therefore, a permanent fence is unnecessary. In addition, institutional controls in the property deed, restricting land and water use, will, if necessary, be implemented to prevent disturbances to the pit area and from obtaining drinking water while it remains contaminated.

UPRR intends to backfill the pit following excavation of the contaminated material in advance of issuance of the ROD amendment. Leaving the pit open until the ROD amendment is finalized creates a safety hazard and would allow an open pathway for rainwater to filter through the soil to potentially contaminate ground water beneath the site.

EPA believes that none of the proposed changes to the selected remedy will adversely affect the protectiveness of the cleanup. All state and federal requirements will continue to be met.

The proposed modifications to the original remedy will continue to provide protection of human health and the environment, and will not affect the achievement of current, site-specific cleanup levels for sludge/soil and ground water. Contaminated sludge and soil will be removed eliminating any possibility of direct contact, and ground water will be pretreated prior to discharge to the city of Pocatello POTW. Testing of sludge and ground water will determine that cleanup levels have been met and are maintained.

There are no potential adverse effects to either the community or onsite workers from implementation of the modified remedy either during the short or long term. All precautions originally required to protect the public and the environment, before and after the remedy is conducted, will continue to be implemented.

HOW MODIFICATIONS WOULD AFFECT ORIGINAL REMEDY AND ACHIEVEMENT OF SITE CLEANUP LEVELS

All of the remaining components of the original remedy will be implemented during 1994.

Original Remedy	Modified Remedy
(1) Excavate contaminated sludge to maximum extent practicable; backfill and cap sludge pit	No change from original
(2) Offsite treatment, if necessary; off-site disposal of excavated material	No change from original
(3) Treatment of soil and floating oily layer on ground water via in-situ soil flushing; onsite oil/water separator and DAF unit with pump and treat; discharge to POTW	In-situ soil flushing and DAF eliminated from ground-water pump and treat system
(4) Advance funding for alternate water supply, if necessary	No change from original
(5) Permanent site fence	Eliminated
(6) Administrative and institutional controls	No change from original
(7) Ground-water monitoring	No change from original
(8) Comprehensive onsite and offsite soil and ground-water sampling and analysis	No change from original

Treatment of contaminated ground water will occur to the extent required by the nature of the contaminants present. Modifications to the remedy do not affect its implementability and cleanup costs will be reduced.

ESTABLISHMENT OF CLEANUP LEVELS AND CONTINUED COMPLIANCE WITH APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)

Applicable requirements are defined as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations required under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a Superfund site. Relevant and appropriate requirements are defined as substantive environmental protection requirements required under federal or state law that, while not "applicable", address problems or situations sufficiently similar to those encountered at the Superfund site that their use is well suited to the particular site.

Establishment of the final cleanup levels was deferred in the original ROD until completion of the soil and ground-water sampling effort. A discussion of these levels follows.

Sludge/Soil

The original ROD stated that all sludge and soil is to be excavated to the maximum extent practicable. Therefore, excavation will proceed vertically to a depth that is technically feasible, and laterally to the point at which excavation sidewalls do not appear contaminated. Sludge and soil removal will not be considered complete until cleanup levels are met.

The primary contaminants of concern include PAHs (such as benzo(a)pyrene, chrysene and benzo(a)anthracene), several VOCs (tri- and tetrachloroethene, methylene chloride) and three metals (arsenic, beryllium and lead).

Cleanup levels for these contaminants were set based on future residential use, risk of direct contact (ingestion of contaminated sludge/soil), and protection of human health at a 1 in 10,000 excess cancer risk.

Groundwater

Groundwater standards are based on levels that EPA considers protective of human health and the environment in the long term. Achievement of these standards will be evaluated by two sets of criteria: performance and compliance monitoring.

Cleanup levels were set using the procedures described in the original ROD, and in the RD/RA consent decree scope of work. They are based on the most stringent ARARs and risk-based concentrations.

Risk-based levels were set using the provisions of the National Contingency Plan (NCP) and risk assessment results. In accordance with the NCP, the aggregate site-specific incremental cancer risk level was set at 1 in 10,000; individual chemical cleanup levels were set such that the sum of site-specific incremental risks met the 1 in 10,000 level. Site-specific incremental risk is defined as the risk attributable to sludge pit-derived contaminants above the risk created by background levels of contaminants.

Risk calculations are based on the assumption that someone would put a well directly over the site and drink that ground water. This is a very conservative assumption because no one is, nor is anyone likely to drink that ground water. However, this approach does provide a high degree of protection for the nearest drinking water wells, less than a mile away.

Contaminated ground water will be pumped from the upper aquifer, sent through the pretreatment system and discharged to the City of Pocatello POTW for an estimated period of three (3) years. It is anticipated that within the 3 year period, the ground-water contaminant levels will drop below their respective cleanup levels. At that time, compliance monitoring will start to verify and ensure that the cleanup levels are maintained. Otherwise, the pumping and treating of the ground water will resume.

The primary contaminants in ground water are PAHs (such as benzo(a)pyrene, chrysene and benzo(a)anthracene). However, long term ground-water monitoring results indicate that the contaminants in ground water beneath the site has changed over time. Excavation of the sludge may further affect contaminants present in site groundwater. Accordingly, performance and compliance monitoring is based on meeting the overall site-specific incremental risk level of 1 in 10,000 and maximum contaminant levels.

Total, site-specific incremental, and background risks will be redetermined based on the results of each sampling round. Ground water will be considered clean when the site-specific incremental risk drops to, or below 1 in 10,000; no NAPL is present; and, all ARARs are met.

STATUTORY DETERMINATIONS

Considering the new information that has been developed and the proposed modifications to the selected remedy, EPA and IDEQ believe that the remedy remains protective of human health and the environment, complies with federal and state requirements (ARARs) that were identified in the original ROD, and is cost-effective. In addition, the modified remedy utilizes permanent solutions to the maximum extent practicable for this site.

FURTHER INFORMATION

The Administrative Record contains all documents used by EPA in making decisions for this site. If you would like to review the Administrative Record, it is available at either:

Pocatello Public Library
812 East Clark Street
Pocatello, Idaho

-or-

U.S. Environmental Protection Agency
Park Place Building, Records Center, 7th Floor
1200 Sixth Avenue
Seattle, Washington 98101

If you have any questions, please call **Ann Williamson**, EPA Site Manager at **(206) 553-2739**;

Jean Baker, Community Relations Coordinator at **(206) 553-2587;**

or call EPA toll-free at **1-800-424-4372**.

The IDEQ contact in Boise is **Clyde Cody** at **(208) 334-0556**

or, in Pocatello,
Gordon Brown at **(208) 236-6160.**

Excavation of the UPRR Sludge Pit began the first week of August, 1994, as required by the ROD and consent decree. Construction-related activities will continue into the Fall of 1994.

United States
Environmental Protection
Agency

Region 10 (HW-117)
1200 Sixth Avenue
Seattle WA 98101

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